

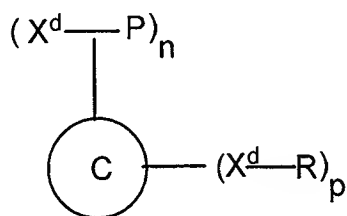
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-397. (Canceled)

398. (Previously Presented) An immunogenic conjugate having the formula:



wherein,

C is a CRM₁₉₇ carrier protein,

X^d is a derivatized functional group of an amino acid residue of the carrier protein,

P is a peptide immunogen comprising an Aβ fragment covalently attached to the derivatized functional group of the amino acid residue of the carrier protein,

R is a capping molecule covalently attached to the derivatized functional group of an amino acid residue of the carrier protein, whereby the functionality of the carrier protein is preserved such that it retains its ability to elicit the desired immune responses against the peptide immunogen that would otherwise not occur without a carrier,

n is an integer greater than 0, but less than or equal to 38, and

p is an integer greater than 0, but less than 38.

399-401. (Canceled)

402. (Previously Presented) The conjugate of claim 398, wherein the Aβ fragment is selected from the group consisting of residues 1-3, 1-4, 1-5, 1-6, 1-7, 1-9, 1-10, 1-11, 1-12, 1-16, 1-28, 3-6, 3-7, 13-28, 15-24, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 25-35, 33-42, 35-40, and 35-42 of Aβ (SEQ ID NO:21).

403. (Withdrawn) The conjugate of claim 402, wherein the A β fragment is residues 1-7 of A β (SEQ ID NO:21).

404-409. (Canceled)

410. (Previously Presented) An immunogenic composition, comprising an immunogenic conjugate of claim 398, together with one or more pharmaceutically acceptable excipients, diluents, and /or adjuvants.

411-413. (Canceled)

414. (Previously Presented) The immunogenic composition of claim 410, wherein the A β fragment is selected from the group consisting of residues 1-3, 1-4, 1-5, 1-6, 1-7, 1-9, 1-10, 1-11, 1-12, 1-16, 1-28, 3-6, 3-7, 13-28, 15-24, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 25-35, 33-42, 35-40, and 35-42 of A β (SEQ ID NO:21).

415. (Withdrawn) The immunogenic composition of claim 414, wherein the A β fragment is residues 1-7 of A β (SEQ ID NO:21).

416. (Previously Presented) The immunogenic composition of claim 410, wherein one or more adjuvants are selected from the group consisting of GM-CSF, 529 SE, IL-12, aluminum phosphate, aluminum hydroxide, *Mycobacterium tuberculosis*, *Bordetella pertussis*, bacterial lipopolysaccharides, aminoalkyl glucosamine phosphate compounds, MPLTM (3-O-deacylated monophosphoryl lipid A), a polypeptide, Quil A, STIMULONTM QS-21, a pertussis toxin (PT), an E. coli heat-labile toxin (LT), IL-1 α , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, interferon- α , interferon- β , interferon- γ , G-CSF, TNF- α and TNF- β .

417-423. (Canceled)

424. (Previously Presented) The immunogenic conjugate of claim 398, wherein the peptide immunogen further comprises a terminal cysteine residue and the peptide

immunogen is covalently attached to the derivatized functional group of the amino acid residue of the carrier protein via the terminal cysteine residue.

425. (Previously Presented) The immunogenic conjugate of claim 424, wherein the terminal cysteine residue is located at the carboxy-terminus of the A β fragment.

426. (Withdrawn) The immunogenic conjugate of claim 424, wherein the terminal cysteine residue is located at the amino-terminus of the A β fragment.

427. (Previously Presented) The immunogenic conjugate of claim 425, wherein the A β fragment is residues 1-7 of A β (SEQ ID NO:21).

428. (Canceled)

429. (Previously Presented) The immunogenic conjugate of claim 398, wherein the capping molecule is selected from the group consisting of an amino group, a hydroxyl group, a cysteamino group, an N-acetylcysteamino group, and an ethanolamino group.

430. (Previously Presented) The immunogenic conjugate of claim 429, wherein the capping molecule is an N-acetylcysteamino group.

431. (Previously Presented) The immunogenic conjugate of claim 398, wherein n is an integer greater than or equal to 5, but less than or equal to 25.

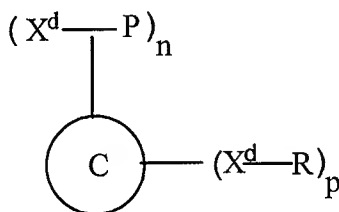
432. (Previously Presented) The immunogenic conjugate of claim 431, wherein n is an integer greater than or equal to 12, but less than or equal to 20.

433. (Previously Presented) The immunogenic conjugate of claim 427, wherein n is an integer greater than or equal to 12, but less than or equal to 15.

434. (Previously Presented) The immunogenic conjugate of claim 433, wherein the capping molecule is an N-acetylcysteamino group.

435-436. (Canceled)

437. (Previously Presented) An immunogenic conjugate having the formula:



wherein,

C is CRM₁₉₇,

X^d is a derivatized lysine residue of CRM₁₉₇,

P is a peptide immunogen comprising residues 1-7 of Aβ (SEQ ID NO:21) and a C-terminal cysteine residue, wherein the peptide immunogen is covalently attached to the derivatized lysine residue via the C-terminal cysteine residue,

R is a capping molecule comprising N-acetylcysteamino covalently attached to the derivatized lysine residue of CRM₁₉₇, whereby the functionality of the carrier protein is preserved such that it retains its ability to elicit a desired immune response against the peptide immunogen that would otherwise not occur without a carrier,

n is an integer greater than 0, but less than or equal to 38, and

p is an integer greater than 0, but less than or equal to 38.

438. (Previously Presented) The immunogenic conjugate of claim 437, wherein n is an integer greater than or equal to 5, but less than or equal to 25.

439. (Previously Presented) The immunogenic conjugate of claim 438, wherein n is an integer greater than or equal to 12, but less than or equal to 15.

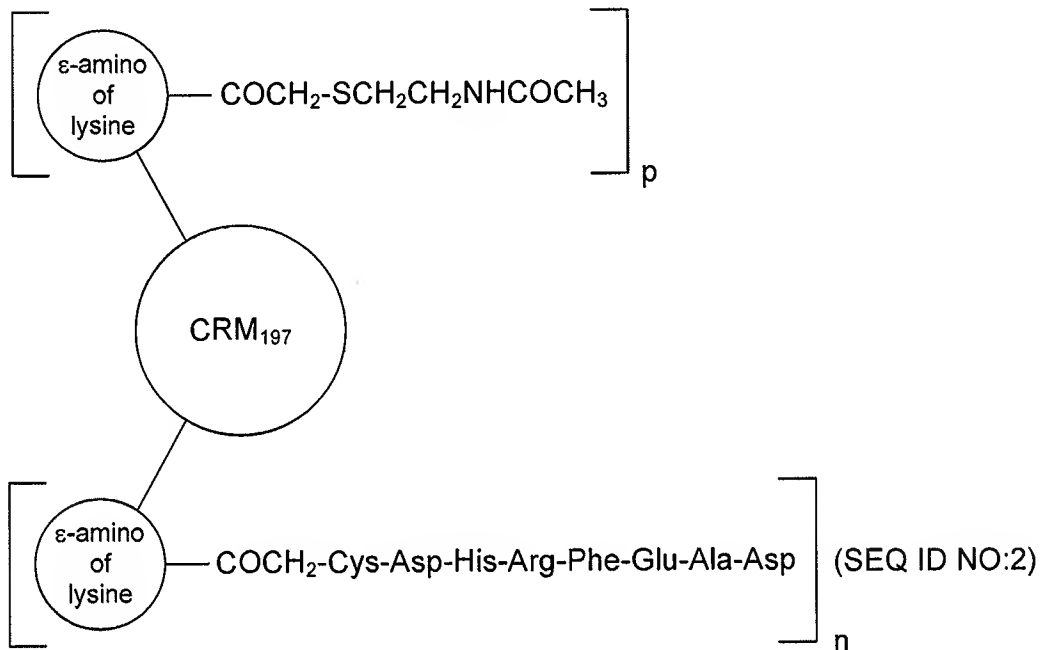
440. (Previously Presented) The immunogenic conjugate of claim 439, wherein n is 12.

441. (Previously Presented) The immunogenic conjugate of claim 439, wherein n is 14.

442. (Currently Amended) The immunogenic conjugate of claim 439, wherein the peptide immunogen is DAEFRHD-C (SEQ ID NO:2).

443-447. (Canceled)

448. (New) The immunogenic conjugate of claim 437 having the formula:



wherein,

n is an integer greater than 0, but less than or equal to 38, and

p is an integer greater than 0, but less than or equal to 38.

449. (New) The immunogenic conjugate of claim 448, wherein n is 12, 14 or 15.

450. (New) The immunogenic conjugate of claim 449, wherein n plus p equals from 20 to 22.

451. (New) The immunogenic conjugate of claim 448, wherein n plus p equals from 20 to 22.